

NEW ZEALAND RAILWAYS

# Staff Bulletin

VOL. 6 NO. 3 GENERAL MANAGER'S OFFICE, WELLINGTON MAY - JUNE 1957



**IN THIS ISSUE:** Railwaymen Who Have Won the V.C. (page 36)



## FROM HERE AND THERE

### AROUND THE RAILWAYS

#### EMERGENCY! FLOODS!

A PARTICULARLY vicious storm during the weekend of 18 May caused extensive flooding and damage in Otago. The Main South Line was blocked between Mosgiel and Milton for ten days. Meantime, urgent and perishable goods were moved by motor truck, and passengers by bus, between Dunedin and Milton, much of the time via back roads as the main road was also blocked. A shuttle service of vehicles hired by the Railways Department from the Commercial Transport Association, plus railways trucks, was operated.

It was later reported that the Department would receive a letter of commendation from the Invercargill Chamber of Commerce for the way in which it cleared the backlog of goods accumulated during the floods. Good work, Dunedin! ●

#### NEW STATION FOR PORIRUA

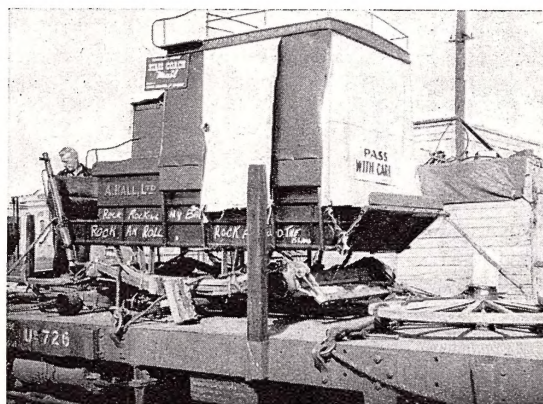
DEVELOPMENT of a city of 32,000 people centred on Porirua is planned by the Housing Division of the Ministry of Works. Already, the growth of population at Titahi Bay, near Porirua, has been rapid, with resultant increased pressure on suburban train services to Wellington. Duplication of the railway between Tawa Flat and Porirua as a first step in eliminating the single-line bottleneck between Tawa Flat and Plimmerton is now well advanced and double line to the south end of Porirua should be in use by the end of this year.

A new railway station with an island platform and improved access will be provided at Porirua as part of the overall scheme. A start on the new station building, to be about 110 ft. long by 17 ft. wide, is expected early next year. This will be followed by a subway, and finally a road overbridge crossing motorway, railway, and Porirua Stream will be constructed to link east and west Porirua.

Additional sidings and extensions to sidings are included in the scheme. Provision is made for a goods shed to be erected at a later stage ●

#### BIG YARD FOR WESTFIELD

A £700,000 project to establish a modern marshalling yard at Westfield, 7 miles south of Auckland, was recently approved by Cabinet. This new yard will be the key point in an extensive plan to modernise railway freight-handling facilities in the Auckland urban area. Reclamation of land from the Manukau Harbour for the new yard is expected to begin later this year ●



#### LATEST IN PIGGYBACK

NOW we've seen everything! The New Zealand Railways will carry almost any object that will fit on or in a wagon and still pass through tunnels, but who would have thought that in A.D. 1957 we would be called on to carry a vintage stage coach piggyback-style.

Nevertheless it's true, as this picture submitted by Mr L. B. Brighton, of Dunedin, proves. Mr Brighton informs us that this old coach used to ply between Arthur's Pass and Westland before the Otira Tunnel was completed. It was sent to Dunedin for participation in the Festival Week procession earlier this year ●

#### RAILCAR SERVICE ACCELERATION

THE time of 6 hr. 5 min. now allowed for the evening railcars to cover the 228.8 miles between Christchurch and Dunedin is the fastest ever regularly scheduled between these two cities. It represents an average speed, without any allowance for stops, of 37.6 m.p.h. The average speed required between stops is 41.6 m.p.h.

Over the plains between Christchurch and Oamaru, 151 miles, an average speed of 47 m.p.h. between stops is necessary for timekeeping ●

#### HAMILTON BUS TERMINAL

A CONTRACT recently let for construction of the new Railway Road Services passenger terminal at Hamilton requires the work to be completed early next year. A new garage has already been built ●

**COVER: Diesel-electric locomotives are now seen on most main routes in the North Island. This "Dg" class 750 h.p. locomotive is hauling the Taneatua-Auckland express train across the Waikato River Bridge at Hamilton.**

N.Z.R. Publicity Photograph



# NEW ZEALAND'S LARGEST RAILWAY STATION

## 20 EVENTFUL YEARS

**I**T was a proud day for Wellington on Saturday, 19 June 1937, when the Governor-General of New Zealand, His Excellency Viscount Galway, unlocked the main door of the new railway station building and formally declared the building open. At last the complexities and disadvantages of railway operation with two outdated, outmoded, inconvenient, and inadequate terminal stations were over.

Work on the new station had begun in 1933 and, when it opened for business in 1937, it was described as "the largest building ever constructed in New Zealand". It was made even larger during the war years, when two floors were added to the Featherston Street wing. The total floor area of the seven-storey building now is about  $5\frac{1}{4}$  acres, and about 800 people are employed there, for it includes the headquarters offices and Wellington district offices of the Department as well as the station offices and passenger facilities.

Passenger business, the main function of the station, has grown tremendously in the past twenty years. The 15,000 passengers who passed through the station on a normal working day in 1937 were considered to constitute heavy traffic. But the figure has grown now to 40,000—20,000 arrivals and 20,000 departures a day.

The total number of passenger train arrivals and departures on ordinary weekdays in 1937 was 140. Now it is 340. At the height of the morning peak period, scheduled trains are arriving and leaving the seven platform tracks at the rate of one every sixty seconds. And shunting movements must be sandwiched between these arrivals and departures. Between 8.7 and 8.22 a.m., arriving trains are depositing their human freight at a rate of 275 passengers a minute.



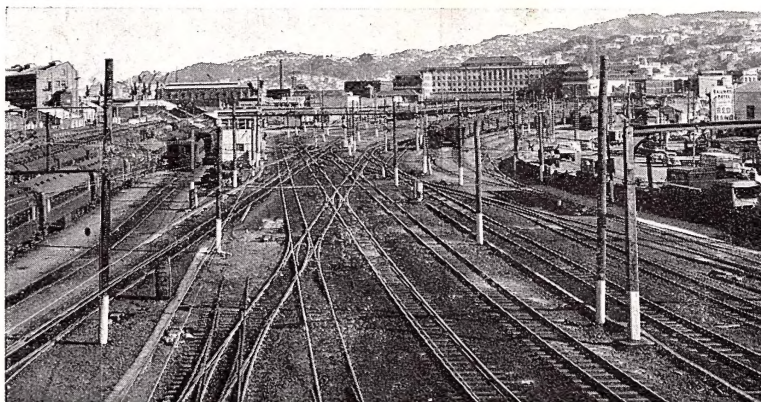
No significant changes have been made to the layout of the approach tracks in the twenty years, but they are now being used to their maximum capacity during the morning and evening peaks. It has been the mobility of multiple-unit electric trains, with quick turn-round times, that has enabled such a striking increase to be effected in the volume of traffic handled.

The twenty years since 1937 have truly been eventful ones. Great moments have included the introduction of the first electric trains in Wellington (Johnsonville line, 1938); the introduction of electric traction on the Paekakariki line in 1940; the "invasion" by the American armed forces in 1942 and 1943 as they prepared for battle in the Pacific; and, more recently, the visit of Her Majesty the Queen in 1954. Innumerable other occasions have seen the arrival and departure of great crowds of people from and to other parts of the country, for Ranfurly Shield challenges, for Springbok v. All Black matches, or just on holiday bent.

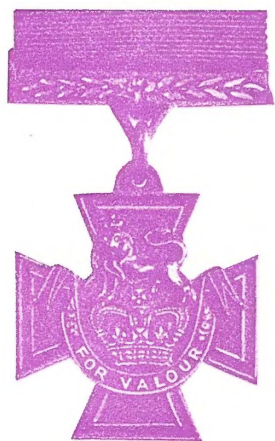
Whether they are suburban or long-distance travellers, Wellington station will continue to serve them all. It undoubtedly will be the nation's busiest single travel centre for a long, long time to come ●

**Wellington railway station, as seen from the pedestrian bridge at the north end. Visible in this picture are the east car yard (left), "A" signal box (centre), and the west, or suburban, car yard (right).**

*N.Z.R. Publicity Photograph*







# FOR VALOUR

## RAILWAYMEN WHO HAVE WON THE VICTORIA CROSS

**I**N two world wars New Zealand railwaymen have gained distinction as soldiers, sailors, and airmen, and more than a few have been awarded high military honours for individual deeds of gallantry on active service. Some of us have worked with such men, often without knowledge of their achievements and their right to wear the D.S.O., the D.S.C., the M.C., the D.F.C., or other decorations.

It is therefore not surprising that very little is known about the two winners of the coveted Victoria Cross who have served with the New Zealand Railways. One of these men was a British regular soldier who joined the railway service on taking his discharge from the army; the other continued his military career after gaining the highest military honour the Sovereign could bestow.

The story of how each of these railwaymen gained his V.C. is now placed on record in the *Staff Bulletin*, for such deeds of valour must not be allowed to become buried beneath the shifting sands of time. The exploits of our fellow railwaymen, whether "on the job" or in other fields of human endeavour, make a valuable contribution to the many and honoured traditions of the New Zealand Railways – traditions of which every one of us should be proud.

The first New Zealand railwayman to hold the Victoria Cross was Edward McKenna, who retired in 1903 from the position of Stationmaster, Wanganui.

McKenna, who was born in 1830, entered the Canterbury Railways in 1867. The broad-gauge Canterbury Railways were at that time owned and operated by the Canterbury Provincial Council. When the New Zealand Government assumed control of the provincial railways in 1876, McKenna was Stationmaster at Kaiapoi. He subsequently held the same position at Invercargill, Bluff, Gore, Greatford, Halcombe, and Palmerston North. In 1896 he was appointed Stationmaster at Wanganui, where he remained until his retirement on superannuation in 1903. His death occurred at Palmerston North in 1908.

The deed for which Edward McKenna received the V.C. was performed during the Waikato War near Camerontown, an army stores depot on the Waikato

River near Tuakau. His was one of fifteen Victoria Crosses won during the Maori Wars of 1860–72.

At that time McKenna held the rank of Colour-Sergeant with the British 65th Regiment, the famed "Bengal Tigers". He was one of 150 men of the 65th, under the command of Captain Swift, who garrisoned the massive Alexandra Redoubt, protecting the movements of British Army supplies on the lower reaches of the Waikato River.

On 7 September 1863, a transport party ferrying munitions and stores to Camerontown from a ship lying inside the Waikato Heads was ambuscaded by a strong force of rebel Maoris. Several of the friendly Maori crewmen were cut down, and among those killed was the resident magistrate for the district, James Armitage.

Fugitives from the attack hurried to the Alexandra Redoubt with news of the tragedy. Half an hour later a party consisting of Lieutenant Butler, Colour-Sergeant McKenna, two sergeants, a bugler, and fifty other ranks, led by Captain Swift, left the redoubt to undertake a 10-mile pursuit of the enemy. It was a difficult and dangerous march through bush, swamp, and stream, and dusk was approaching when the small force neared the spot where it was thought the rebels would be intercepted.

McKenna, whom James Cowan in later years described as an excellent type of British non-commissioned officer, "intelligent, experienced in bush warfare, and well qualified in command", obtained permission from Captain Swift to go ahead and reconnoitre. He found the Maori encampment some 400 yards beyond a large clearing, and quickly reported back to Captain Swift, who gave the order to fix bayonets and advance.

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References used in the preparation of this article include *New Zealand Wars* and *Hero Stories of New Zealand*, by James Cowan; *The Wellington Regiment*, by W. H. Cunningham, C. A. L. Treadwell, and J. S. Hanna; and *The Victoria Cross*, by Lt.-Col. Rupert Stewart.



Led by Captain Swift, Lieutenant Butler, and Colour-Sergeant McKenna, the detachment stole to within a few yards of the rebel positions. Swift then gave the order "Charge!" Scarcely had he uttered the word than the forest was illuminated by a blinding flash as the Maoris opened-up with a devastating volley of small-arms fire. The soldiers reeled back from the fury of the onslaught, but seasoned veterans that they were they soon recovered and took up skirmishing order. Within a few minutes both Swift and Butler were wounded, the former mortally, and the latter very severely.

The dying Captain Swift gave McKenna his revolver and ordered him to take command. McKenna then led the little force with such determination that the rebels were forced back some distance. However, the position was critical, as the soldiers were almost surrounded by some three hundred enemy riflemen.

McKenna continued to hold a clearing until a small party could evacuate the wounded officers, and



**Mortally wounded, Captain Swift sees Colour-Sergeant McKenna reloading his Enfield rifle and says, "Never mind that; take my revolver and lead the men".**

*From Hero Stories of New Zealand, by James Cowan (H. H. Tombs Ltd., 1935).*



**Edward McKenna, wearing his Victoria Cross, posed for this photograph in 1906 on the sixtieth anniversary of his enlistment with the British Army. The print was kindly loaned by his daughter, Mrs A. W. O. Travers, of Wellington.**

throughout the night he and his remaining thirty-eight men fought a determined rearguard action under heavy fire. The whole operation was conducted with great skill and judgment, and next morning, after having shaken off the rebels, the gallant little band emerged from the forest carrying their wounded. Within a short time they were met by a strong detachment of the 65th Regiment which was hurrying to relieve them.

Later, at the Queen's Redoubt, Colour-Sergeant McKenna was sent for by Lieutenant-General Cameron, who commanded the British and Colonial forces ranged against the followers of the Maori "King". Cameron warmly complimented McKenna for his conduct, and in a subsequent dispatch to Governor Grey expressed his admiration and approval of the manner in which the members of the detachment had acquitted themselves. It was on the General's recommendation that Colour-Sergeant McKenna received the Victoria Cross and an ensign's commission.

The *London Gazette* of 16 January 1864 contained McKenna's citation, which made reference to his gallant conduct and recorded that he was "a commander whose coolness, intrepidity, and judgment justified the confidence placed in him by the soldiers brought so suddenly under his command".



**RIGHT: Brigadier L. W. Andrew, who won his Victoria Cross in 1917 as a railway cadet on active service with the N.Z.E.F. in Belgium.**

*Photograph: Courtesy N.Z. Army*

The second New Zealand railwayman to win the Victoria Cross was a clerical cadet, Leslie Wilton Andrew, who was born in 1897 at the little town of Ashhurst, near Palmerston North. Cadet Andrew's railway career must have been fairly brief, as he enlisted with the army in 1915 and won the V.C. two years later. He received his commission in 1918, and after returning to New Zealand in 1919 obtained a transfer from the Railways Department to the Defence Department. In 1952 he retired from the Army with the rank of Brigadier, having been Commandant of the Central Military District from 1948.

During his long and distinguished career after the 1914-18 war, Brigadier Andrew saw service in other parts of the world. He was with the British Army in India from 1927 to 1929, and during the 1939-45 war served with the 2nd New Zealand Division in Greece, Crete, and the Western Desert. Before returning to New Zealand in 1942, Brigadier Andrew had added to his V.C. a D.S.O. and mention in dispatches.

Brigadier Andrew had the honour of visiting England as a member of the Coronation Contingent of 1937, and also as a member of the Victory Contingent of 1946. Last year he led the New Zealand Victoria Cross Contingent which attended the V.C. commemoration celebrations in London.

But it is not as a Brigadier that many older railwaymen will remember him. He is remembered as Cadet L. W. Andrew, Head Office, on active service with the New Zealand Expeditionary Force and holder of the rank of Lance-Corporal in the Wellington Regiment.

Cadet Andrew, Head Office, won his V.C. on 31 July 1917 for "most conspicuous bravery" during an attack on an enemy outpost at La Basse Ville, near Messines, Belgium. The 2nd Battalion, Wellington Regiment, had captured La Basse Ville on 27 July, but soon afterwards had been driven out by strong German counter-attacks supported by very heavy artillery fire.

A few days later, as part of a big British advance in the Ypres Salient, the N.Z. 1st Brigade was ordered to take and hold the village, the actual capture being delegated to the 2nd Wellington Battalion, of which Lance-Corporal Andrew was a member.

The attack was launched in the early hours of 31 July, and within a very short time, but not without some hard fighting, the village was in the hands of the New Zealanders. During the action Lance-Corporal Andrew, with two sections of the Wellington-West Coast Company, was allotted the task of destroying an enemy post in an estaminet. As the party moved forward it came unexpectedly on a German machine-gun post which was holding up the advance of another company of the Wellington Regiment. Working along the railway, Andrew and his men attacked this machine-gun post and captured it, thus enabling the Ruahine Company to continue its advance.



Andrew then concentrated on the troublesome machine-gun in the estaminet. This gun was firing continuously. He and his party moved around to one side of the building and crawled through a patch of thistles until they were within striking distance. They hurled a shower of hand grenades, waited, and then rushed the position. Those members of the German garrison who had not been killed were routed and the gun captured.

While some of his men carried back the captured gun, Andrew and another soldier went further afield in pursuit of the enemy. Some 300 yards along the road they came to another building in which some Germans had a machine-gun post. This also was rushed and captured.

For his leadership and gallantry that day, Andrew was awarded the Victoria Cross, the first to be won by a member of the Wellington Regiment.

In his citation, published in the *London Gazette* of 6 September 1917, Corporal Andrew was commended for his "great skill and determination". The citation continues: "Corporal Andrew's conduct throughout was unexampled for cool daring, initiative, and fine leadership, and his magnificent example was a great stimulant to his comrades."

There are the stories of two men. It is possible that we have among our fellow railwaymen others who in time of war have performed individual acts of heroism that in the heat of battle were overlooked or unobserved—deeds that were deserving of worthy recognition. The position has been summed up by Sir John Fortescue, the British Army historian, who wrote thus of the Victoria Cross: "Many a man has earned it who for want of witnesses has never received it; and men have received it in one campaign for deeds that would have passed unnoticed in another and greater. Such accidents are inevitable." ●



# NEW LINE AT WOODVILLE

## *£100,000 Scheme to Improve Important Junction*

**T**O enable trains travelling between the Wairarapa and Hawke's Bay districts to pass through Woodville without having to be reversed, a new main-line connection is being constructed. At the same time, Woodville station yard will be extended, rearranged, and equipped with a modern signalling system.

At present, the Wairarapa line from the south and the Hawke's Bay line from the north both enter Woodville yard at the eastern end. Since the Rimutaka Tunnel was opened, however, much traffic between Wellington and Hawke's Bay stations has been diverted via the Wairarapa line, and avoidance of the need to reverse these trains at Woodville is essential. The present requirements make it necessary to keep a track clear for the "run-round" movements, thereby limiting the capacity of the yard to a marked extent. At times, four or five goods trains may be at Woodville at once and, with the main line left clear for the passage of railcars, there is no room to deal with all of them expeditiously.

To overcome these problems, the new  $1\frac{1}{4}$ -mile main-line connection shown in the plan below will be provided. It will turn off from the Wairarapa line just short of the Napier end of Woodville yard, curve to the south, and then swing back to join the Napier line at the other end of the station. Trains from the Wairarapa line will thus be able to enter Woodville yard from the Palmerston North end facing in the right direction to continue northward to Napier.

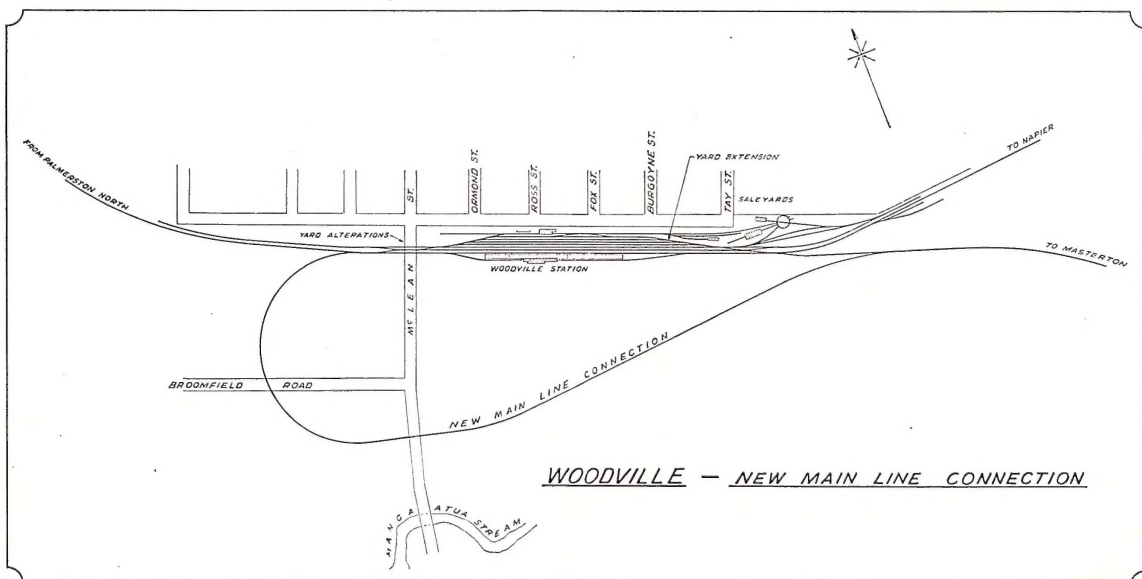
At the same time, the capacity of the yard will be increased from 306 to 391 wagons. Sidings will be lengthened and the arrangement of tracks altered.

This will release an extra track for shunting movements.

Ultimately, power-operated points and colour-light signals throughout the area, controlled from a compact, centrally situated panel in the station building, will be provided throughout the area to give cheaper and quicker working. The two existing signal boxes, with their massive mechanical interlocking, will be eliminated. Level-crossing alarms will be provided at a new crossing over McLean Street.

The layout of the new connection follows intensive investigation of several alternative schemes. To some people, the apparently logical answer would have been to construct a direct connection from the Wairarapa line to the Napier line at the eastern end, thus forming a triangular junction and bypassing the present station and yard entirely. This arrangement, however, because of the amount of interchange traffic to be dealt with, would have involved provision of a complete new marshalling yard at prohibitive cost. Furthermore, investigations showed that gradients would be unfavourable and the whole arrangement would be expensive to operate.

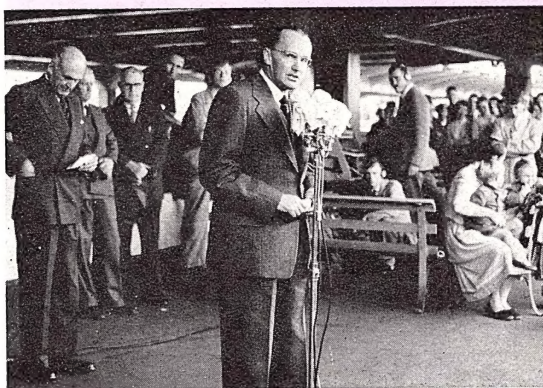
Total cost of the project now in hand will be nearly £100,000, but it was the most economical of all schemes, both in construction and in operating costs, in relation to the benefits obtained. The size of the project reflects the growing importance of Woodville as a traffic centre since the Rimutaka Tunnel was opened. It will not only speed up the handling of traffic, but will make for greater economy of operation ●





# AUSTRALIAN LOCOMOTIVE

*Clyde-built GM Diesel*



**UPPER:** Maker's plate on the side of Clyde-built locomotive "Da" 1430.

**CENTRE:** Mr W. R. Hudspeth, Senior Australian Trade Commissioner, who handed over the first of the Australian-built diesel locomotives.

**LOWER:** The Minister of Railways (Mr J. K. McAlpine) holds up the key of "Da" 1430.

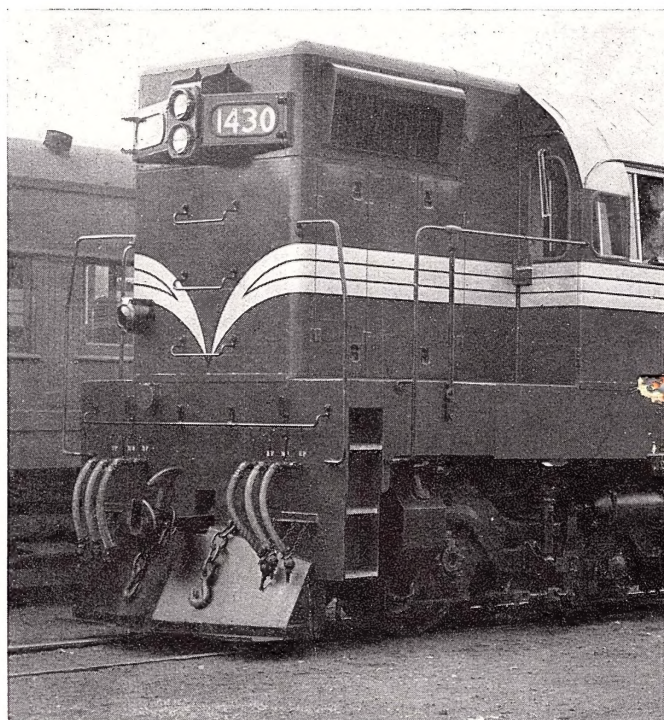
*N.Z.R. Publicity Photographs*

At a ceremony held at the Auckland railway station at 3.40 p.m. on 30 April, the senior Australian Trade Commissioner in New Zealand (Mr W. R. Hudspeth) formally handed over to the Minister of Railways (Hon. J. K. McAlpine) the first diesel-electric locomotive built in Australia for New Zealand Railways. It was the first of ten ordered from the Clyde Engineering Co. Pty. Ltd., New South Wales, and was of similar design to the 30 successful "Da" class main-line locomotives imported from North America in 1955.

In handing over the new locomotive, Mr Hudspeth drew particular attention to this evidence of the capacity of Australian industry to supply New Zealand's needs for this type of equipment. Especially was this important, he said, in view of Australia's and New Zealand's joint geographical isolation. The short shipping distance, the ready availability of spares, and the ease of having discussions were very real advantages.

He recalled that the Clyde Engineering Co. was now 102 years old and now employed more than 1,000 people. At the present time, they had orders for over 100 large locomotives and were planning to increase their production capacity to 100 per annum as from next year.

Mr Hudspeth outlined the development of the firm and referred to the worth-while economies experienced by railways throughout the world following the introduction of diesel locomotives. He then handed the key of the locomotives to Mr McAlpine.





# YES FOR NEW ZEALAND

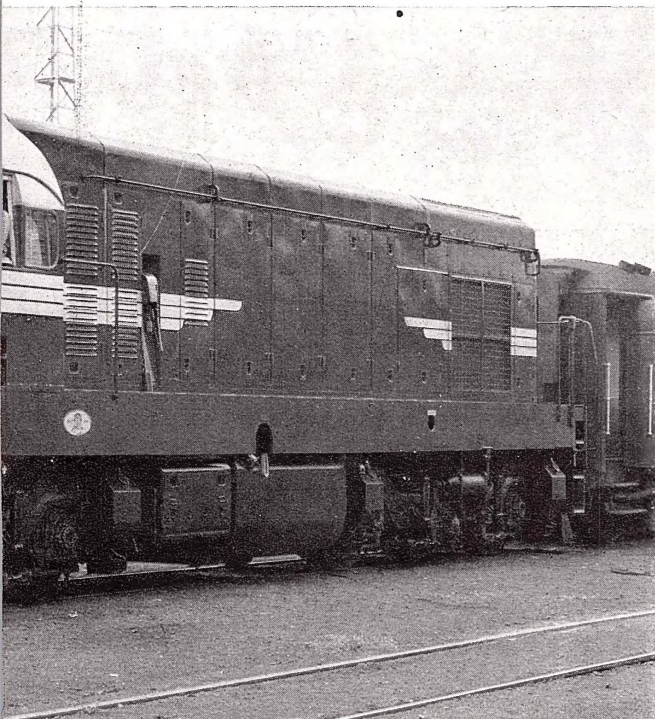
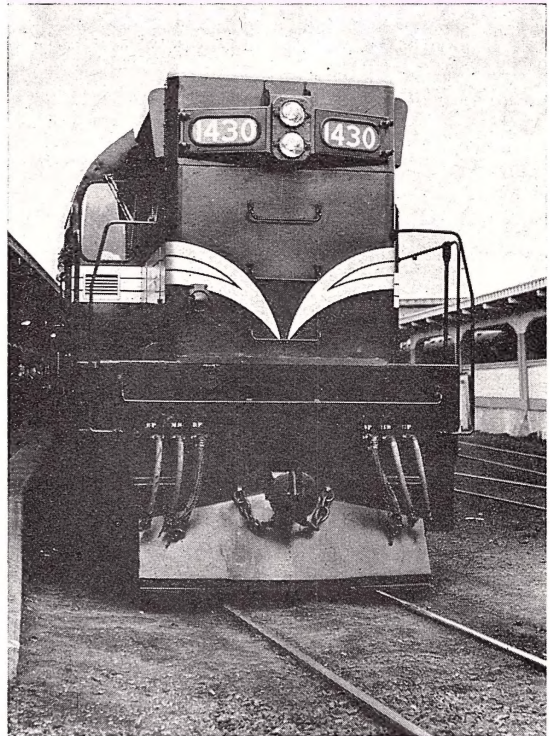
## Now Being Delivered

In officially accepting the new locomotive, No. 1430, on behalf of the Railways Department, Mr McAlpine mentioned that this was not the first time that a locomotive had been supplied to New Zealand by Australia. As long ago as 1861 and 1864, three small steam locomotives were built in Victoria for the wooden railway between Invercargill and Makarewa in Southland, and the first locomotive for the broad-gauge Canterbury Railways was purchased unused from the Melbourne and Essendon Railway in 1863.

The new locomotive now being received, however, was the first diesel-electric type from Australia and was a magnificent example of what Australian industry could achieve. He outlined the economies that the earlier main-line diesel locomotives had made possible, and particularly drew attention to the improvement obtained in the transit times for goods over the North Island Main Trunk Railway.

After the ceremony, the guests, including the General Manager of Railways (Mr A. T. Gandell), the General Manager of Clyde Engineering (Mr H. Limmer), and about 60 businessmen, farmers, and members of Parliament, were taken on a short run to Papatoetoe and back behind the new locomotive. On the outward journey, via Newmarket and Remuera, Mr McAlpine was at the controls. The return journey was via Tamaki and Orakei.

Guests later attended a cocktail party given by the manufacturers to celebrate the occasion.



**RIGHT, UPPER:** "Da" 1430 about to leave Auckland on a run to Papatoetoe and back.  
**RIGHT, LOWER:** The Minister of Railways tries his hand at driving an Australian-built diesel locomotive.

**LEFT, LOWER:** "Da" 1430, first of the ten GM diesel locomotives ordered from Clyde Engineering by the New Zealand Railways.

*N.Z.R. Publicity Photographs*



# AUSTRALIAN DIESELS MOVE MOUNTAINS

## Record Loads on B.H.P. Iron Knob Tramway

**A**USTRALIAN-BUILT diesel locomotives of the same type as our "Da" class are now in use on several railways in different parts of the world, but it is safe to claim that nowhere do they haul loads comparable with those handled on the Iron Knob-Whyalla railway in South Australia.

This 33-mile railway is owned and operated by the Broken Hill Proprietary Co. Ltd., and is used to convey iron ore from Iron Knob and Iron Monarch to the sea at Whyalla, whence the ore is shipped to Newcastle, N.S.W. The line is laid with rails weighing 97-104 lb. per yard and has a gauge of 3' 6".

For many years the Iron Knob Tramway has belied its title, for if ever proof was needed of the capabilities of the 3' 6" gauge as a means of moving really heavy tonnages, it may be found on this line. Good equipment and efficient operation have made it practicable to handle huge trains with ease.

Iron ore is carried in big bogie hopper cars of all-steel construction and rated to hold 55-57 tons. The laden weight of each car is in the vicinity of 75 tons.

Until recently the railway was worked by steam locomotives, which hauled loads that were staggering by New Zealand standards. The locomotives used for main-line haulage were four Baldwin-built 2-8-2s, supplied in 1919, 1928, and 1938. The largest and most modern of these was No. 9, which weighed nearly 158 tons in working order. Heavy shunting was undertaken by two Baldwin 4-6-0s of 1914 vintage, larger and more powerful versions of our old Baldwin "Ub" class.

Each of the big 2-8-2 locomotives was rated to haul 29 loaded hopper cars, an empty water tank, and a brake van from Iron Knob to Whyalla, the gross load behind the tender being 2,175 tons. With this load the 33 miles were covered at a steady 20-25 m.p.h., except for the 2-mile climb of 1 in 150 out of a

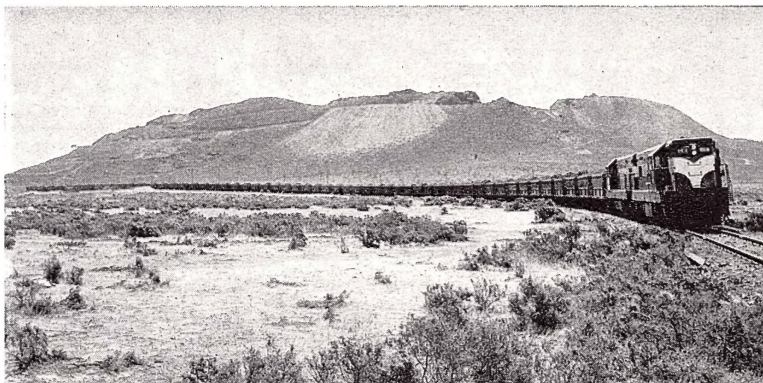
depression known as "The Soak", which was approached at about 45 m.p.h. and surmounted at 6-8 m.p.h.

The heaviest train ever recorded with steam operation was one of 3,763 tons hauled by engine No. 9 assisted by engine No. 8. On another occasion, in 1933, No. 8 hauled unassisted a train of 2 water tankers, 25 50-ton ore cars, 25 17-ton ore cars, and a brake van - a gross load of 2,499 tons.

Now that the steam age has ended on the Iron Knob Tramway, the heavy trains which have always been a feature of the line appear to have become even heavier. All train haulage and shunting is now carried out by diesel-electric locomotives supplied by the Clyde Engineering Co., New South Wales. The 4 main-line locomotives are of the 1,425 h.p. General Motors G-12 type, similar in nearly all respects to the "Da" class of the New Zealand Railways. There are also 2 smaller locomotives of the General Motors G-8 type, rated at 950 h.p., for marshalling and shunting duties at Whyalla.

When it was decided to replace steam motive power with diesels, plans were made for trains weighing 3,800 tons to be hauled by two of the larger locomotives, presumably coupled in multiple. At the same time it was expected that considerable savings could be achieved through improved turn-round time and lower running costs.

The remarkable capacity of these diesel locomotives for heavy haulage was effectively demonstrated last January, when a special test train was run from Iron Knob to Whyalla. Hauled by 2 G-12 locomotives, this train consisted of 54 bogie cars laden with 3,185 tons of ore, the gross weight behind the locomotives being 4,200 tons. This was a remarkable performance for a 3' 6" gauge railway, and it is doubtful whether a heavier train has ever been run on any railway outside the North American continent.



**Fifty-four cars of ore weighing 4,200 tons leave Iron Knob behind two Clyde-built diesel locomotives similar to the N.Z.R. "Da" class.**

*Photograph: Courtesy Clyde Engineering Co. Pty. Ltd.*



# NEW ZEALAND LOCOMOTIVES IN AUSTRALIA

**T**HE purchase of 10 diesel-electric locomotives from the Clyde Engineering Co., New South Wales, calls to mind occasions in the past when New Zealand exported locomotives to various railways in Australia.

In 1875, when the gauge of the Bluff-Invercargill-Winton line was converted from 4' 8½" to 3' 6", the Otago Provincial Council was fortunate enough to interest the New South Wales Government Railways in purchasing the redundant broad-gauge locomotives and rolling stock. The equipment was loaded aboard the ship *Cezarewitch* at Bluff, but it never reached Australia. Today, the tubes of a locomotive boiler reach skyward from a reef at Big Bay, South Westland. They mark the last resting place of the leaky old *Cezarewitch*.

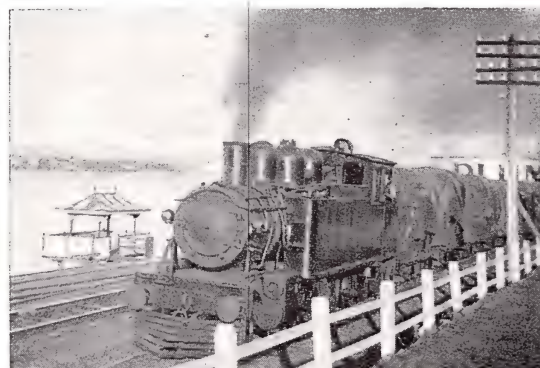
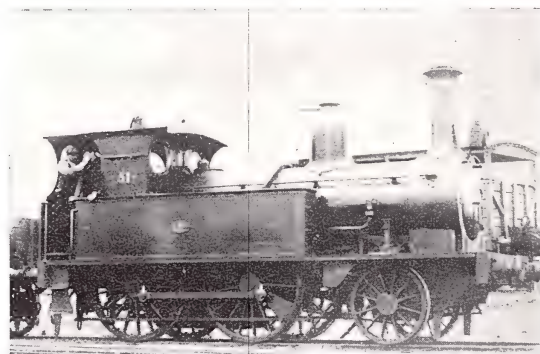
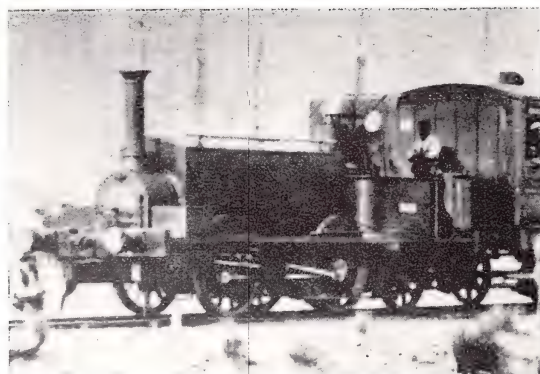
The next sale to Australia was made in 1877, when the 5' 3" gauge Canterbury Railways were converted to 3' 6". The broad gauge stock—9 locomotives and parts for a tenth, 22 coaches, 2 brake vans, and 287 wagons—was sold to South Australia and shipped from Lyttelton on the sailing vessel *Hyderabad*. This ship was wrecked near Foxton, but all the railway equipment was later salvaged and sent on to Australia. Some of the locomotives were in service on the South Australian Railways until 1929.

During the early nineties the 3' 6" gauge Western Australian Government Railways sought to buy surplus locomotives and wagons from the New Zealand Railways. The result was that 3 "S" class "Single-Fairlie" locomotives of 1880 vintage and some 200 "L" and "M" wagons changed hands. The locomotives became Class "I" of the W.A.G.R., and were used until 1900.

An acute shortage of motive power prompted the 3' 6" gauge Tasmanian Government Railways, in 1939, to purchase 4 "Wf" class tank locomotives from the N.Z.R., and in 1944 these were followed by four more. Fitted with side buffers and vacuum brakes, and classified "DS", the former "Wf's" were used for some years on suburban trains. It is believed that one or two may still be in service on Tasmania's two privately owned railways ●

**RIGHT, FROM TOP:** One of three Southland broad-gauge locomotives sold to N.S.W., but lost in a shipwreck ★ A Canterbury broad-gauge locomotive at work on the South Australian Railways ★ Three of these "S" class "Single-Fairlie" locomotives were purchased by the Western Australian Railways in 1892 ★ Goods train leaving Hobart, Tasmania, behind a former N.Z.R. "Wf" class 2-6-4 tank locomotive.

*Photographs:*  
Nos. 1 and 2, W. W. Stewart Collection;  
No. 3 courtesy Alexander Turnbull Library;  
No. 4 courtesy K. Flood, Tasmania





# MEMORIES OF A LOCOMOTIVE CLERK

by

A. A. Boulton

**T**HE writer joined the New Zealand Railways in the long-since-defunct Locomotive Engineers' Office at Petone, on 15 September 1900. In those far-away days the Locomotive Engineer was really Workshops Manager as well. However, after a brief sojourn of three months I was transferred to the Locomotive Superintendent's (now Chief Mechanical Engineer's) office in Wellington. I wonder how many railwaymen of today know that the head offices were then in the old wooden Government Buildings. The Locomotive Superintendent's suite was on the second floor just under the clock.

The Locomotive Engineer at Petone was then the late Mr T. A. Peterkin (of evergreen memory to us old-timers) and the Locomotive Superintendent was the late Mr A. L. Beattie. Both are pleasant memories.

My first job in the Locomotive Superintendent's office was posting Loco. 1's (enginedrivers' daily running sheets) to the Loco. 48 engine diaries. As far as memory goes, eight columns were used for mileage, viz., passenger, mixed, goods, assisting, light, ballast, shunting, and total. Another cadet and I did the work, one doing the North Island and one the South. In those days the small sections did not send their running sheets to Wellington, but they did so later on.

My mate and I changed over from North to South after a time and, in this way, I got a good knowledge of the enginedrivers, engines, and runs in both Islands which has never quite left me. Incidentally, in those days, enginedrivers were "enginemen" and Locomotive Foremen were "Running Shed Foremen".

The express runs were very exclusive jobs and, generally speaking, each man had his own engine which was a "holy of holies" to him. They were cleaned and polished to a degree which could hardly be credited in these days, and woe betide the cleaner who shirked his job.

Pride of place had to be given to the Christchurch crews, for these men were on the most important express runs of the day. E. Adams with "Ub" 284 and A. Ternent as fireman, and J. Trevella with "Ub" 279 and A. Castle as fireman, were the regular men. They ran from Christchurch to Oamaru one day and returned the next. In those days the locomotive men worked a 54-hour week (9-hour day) and this run was rated as a "Special Service", the crews concerned being paid 9 hours for about 7½ hours work. There were quite a few "Special Services" but, except for the case quoted, the men were on duty for considerably more time than they were paid for. An example was the Greytown Branch (Engineman D. Spring).



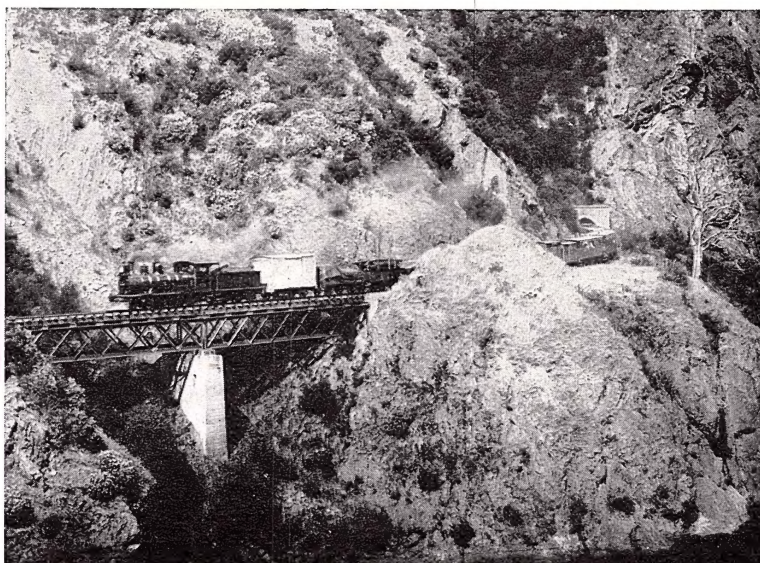
**Petone Railway Workshops as they appeared during the early nineteen-hundreds. It was here that Mr Boulton began his railway career.**

*Photograph: Courtesy Alexander Turnbull Library*



Sixty years ago in the Manawatu Gorge – a little "J" class locomotive trundles toward Palmerston North with a mixed train from Hawke's Bay.

N.Z.R. Publicity Photograph



In this case the crew were on duty something like 14 hours from start to finish, but were paid for 9 hours only. The reason was, of course, that they had a good deal of spare time between runs.

On the then-isolated Auckland Section the "Express" was worked from Rotorua. It ran to Auckland 3 days a week and *vice versa* the other three. The driver, in 1901, was T. Cairns and the engine an old "J" 2-6-0. I fancy the number was 262.

I am not so clear as to Oamaru-Dunedin, Dunedin-Clinton, and Clinton-Invercargill runs. Three of the "Ub" (flat-valve) 4-6-0 engines, viz., 280, 281, and 282, were stationed at Oamaru, "U's" and "Ua's" being located further south.

In those days, of course, the Government mail trains from Wellington ran via the Wairarapa. At the time I joined, the old Single-Fairlie "S" class (0-6-4T) were running between Wellington and Sumner. In 1901 they were superseded by the Baldwin "Wd" 2-6-4 tank engines. Enginedrivers at Wellington were Clark (Scotty) Allen ("Wd" 316), W. Makin ("Wd" 321), and George Gilpin ("Wd" 318). Fine chaps they were too. The Cross Creek - Napier set-up was specially interesting. The Napier men (H. Davis with "N" 37, R. Durrant with "N" 42, and M. McGrath with Compound "N" 27 – all 2-6-2 type locomotives) came down to Cross Creek and back to Masterton one day and returned the next. At Masterton a "three-leg" gang (Driver T. C. Huston, Fireman and Acting Driver R. A. Telfer, and Fireman A. McKay) with engine "N" 34 ran Masterton to Cross Creek, and thence to Napier one day, and *vice versa* the next. On two days a week, therefore, the mail train was worked by an acting enginedriver – and that in the days when express and mail drivers were a class apart.

In later years, when I was at Napier – shortly after the Manawatu line was taken over, the Napier men worked down to Paekakariki one day and back the next. Two Paekakariki gangs, with engines "N" 453 and 454, worked the reverse way, and I recall that

one of the drivers was David Gamble who eventually became Locomotive Foreman at Auckland. This arrangement was of very short duration.

The Palmerston North - New Plymouth mail trains were worked in three comparatively short stages, viz., Palmerston North - Wanganui, Wanganui-Hawera, and Hawera - New Plymouth. "Wa" 2-6-2T locomotives were the ruling engines at Palmerston North, "Wb's" at Wanganui and Hawera, and "E's" (Double-Fairlies) at New Plymouth. I remember that, at one stage, the four "M" (2-4-4T) engines were spruced up and sent to New Plymouth for mail train and other work.

Drivers on this section who come to mind were H. Downey, B. Boden, and J. Pye (Palmerston North); A. Hodge, A. B. Feasey, J. Currie, and C. G. Lee (Wanganui); J. Foreman and H. Hay (Hawera); and J. Logie (New Plymouth). I recollect riding from New Plymouth to Hawera on the footplate of an "E" with Jack Logie.

The daily milages obtained from engines in those days are worthy of note. The Christchurch-Oamaru engines did 152 train-miles in a day, but this was easily beaten in the North Island. The little "J" did 171 miles daily between Rotorua and Auckland. But, as far as I remember, the record was held by the Cross Creek - Napier mail engines. With the added runs to or from Masterton, these engines ran exactly 200 train-miles a day without change.

In 1901, shortly after the period mostly covered by these notes, the "Q" 4-6-2, "Ub" (piston valve) 4-6-0, "Wd" 2-6-4T, and a second lot of "N" 2-6-2 engines arrived and took over a good share of the express and mail runs.

These notes are written entirely from memory but, even after more than 50 years, I think that they would be found very close to fact.

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# RAILWAYMEN IN THE NEWS

## WITH THE ALL BLACKS IN AUSTRALIA

ONCE again railwaymen have represented New Zealand in an international sporting contest. The All Black rugby team which recently toured Australia, and which returned undefeated, included two railwaymen—Fitter M. J. Dixon, of the Christchurch Locomotive Depot, and Apprentice Carpenter T. R. Lineen, of Otahuhu Workshops.

It will be recalled that Mr Dixon has previously represented New Zealand. He was a member of the New Zealand rugby team which toured Great Britain in 1953–54, and last year he played against the South Africans in all four test matches and also represented Canterbury in the provincial match against the Springboks.

Congratulations are extended to Mr Dixon and Mr Lineen on their selection to the ranks of those privileged to wear the coveted All Black jersey.

## NATIONAL PHOTOGRAPHIC HONOURS FOR RAILWAYMAN

IN the selection for the sixth National Salon of the Photographic Society of New Zealand, held recently at Wanganui, the award for the champion colour slide went to Mr J. A. Froggatt, Assistant Staff Clerk in the District Traffic Manager's Office, Dunedin. Mr Froggatt's entry, *Symphony in Iron*, earned him the Robinson Cup.

In the black and white print section, also, Mr Froggatt gained success with his entry *The Old Timer*.

Mr Froggatt has had 3 years' experience in photography, and only 8 months in colour work. To win a national competition after such relatively brief experience is an indication of his capabilities as a photographer. All railway men and women will join in congratulating Mr Froggatt on his award, and in wishing him success in future competitions.

## QUEEN HONOURS RETIRED RAILWAYMAN

MR W. E. HODGES, who retired on superannuation at the end of March, was among those on whom Her Majesty the Queen recently conferred honours on the occasion of the celebration of her birthday. He became a Companion of the Imperial Service Order (I.S.O.). Mr Hodges served as chairman of the Railways Commission from its inception in 1952 until its disbandment earlier this year.

## VETERAN MOUNTAINEER

BAD weather defeated a recent attempt by Mr L. Duffin, Stationmaster at Upper Hutt, to scale Mount Ruapehu (9,175 ft.) for the seventieth time. However, it is understood that Mr Duffin proposes to make another attempt about the end of July.

Mr Duffin has been climbing Ruapehu since 1923. He has also climbed Ngauruhoe fifty times, and twice in 1924 he climbed all three peaks in the Tongariro National Park one after the other.

On the first of these marathon climbs, Mr Duffin and a companion started out at 5 a.m. and climbed across the glacier of Ruapehu to the peak. They then ascended Ngauruhoe and finally climbed Tongariro, coming out at Ketetahi Springs after 26 hours of climbing. They repeated the performance in reverse 3 months later, taking 25 hours.

On yet another occasion, Mr Duffin climbed Ruapehu during the day and descended to the Chateau, after which he cycled to Ongarue, 55 miles away. He reached home at 2.30 a.m.

It is understood that when this mountaineering stationmaster sets out on his seventieth ascent of Ruapehu, he will carry a spare denture and a supply of chocolate that does not contain brazil nuts!

## DISTRICT TRAFFIC MANAGERS MEET AT WELLINGTON



An informal group at the conclusion of the District Traffic Managers' Conference, held at Wellington during June. **STANDING, FROM LEFT:** Messrs D. M. Hoult (D.T.M., Dunedin); P. Hogan (D.T.M., Wanganui); E. L. G. Butcher (Chief Accountant); J. R. Barker (Commercial Manager); G. W. Brown (Acting Personnel Manager); E. W. Hayton (D.T.M., Christchurch); S. Smith (D.T.M., Wellington); A. W. Egan (D.T.M., Auckland); A. Hartley (Senior Staff Officer); C. E. Smith (Asst. Transportation Superintendent). **SEATED:** Mr F. R. Murray (Transportation Superintendent).

N.Z.R. Publicity Photograph



# OVERSEAS RAILWAYS

## (7) SOROCABANA RAILWAY, BRAZIL

**S**OUTH AMERICA to most New Zealanders is virtually unknown territory. Brazil, for example, is simply a big area on the map and noted for coffee and South American rhythm. Brazil in fact is greater in area than the United States. It contains practically half of the population of South America, although its 60,000,000 people are largely concentrated on the seaboard.

Brazil is served by 23,000 miles of railways and, of these, nearly 21,000 are laid to the metre gauge (3 ft. 3 $\frac{3}{8}$  in.). Those who think, however, that such a "narrow" gauge is a severe limit on traffic-carrying capacity would be sadly disillusioned in Brazil. One of the busiest of these metre-gauge systems is the Sorocabana, extending westwards from the city of Sao Paulo (population 2 $\frac{1}{2}$  million, rapidly growing, and capital of the state of the same name), with branches connecting with other railways north and south. The facts and figures below indicate the standard of equipment and service rendered by this busy railway, but first, this is what Brian Fawcett, writing in *Trains* magazine last year, had to say:

"These meter-gauge trunk systems are in every way comparable to the broad-gauge roads—even in the matter of speed, which in Brazil is in any case moderate. The Sorocabana, for instance, would be a fine road in any man's country, and the route of the international trains is under full electrification for 125 miles out of Sao Paulo. The remarkably comfortable stainless-steel cars are headed by distinctive GE 1-C+C-1's on 3,000-volt direct current. Dining services on these trains are the best I have found in Brazil. And the deep car windows allow one an unrestricted view of the really lovely country traversed by much of the Sorocabana."

The density of traffic on this system may be judged from the fact that it produces annually as much ton-milage of freight as New Zealand Railways, but on a route-milage less than one-half as extensive (1,347 miles compared with 3,480 miles). The state of technical development may be assessed from the facts that, even in the late thirties, the Sorocabana was operating steam locomotives larger and more powerful than any in New Zealand; the electric locomotives now in use are more powerful than ours; the moving structure gauge and permissible axle loadings are both greater; and stainless-steel coaches are in use on the principal trains. Because of the fuel situation in Brazil, railway policy there now is to electrify main lines as much as possible, and to introduce diesel traction on lines of lighter traffic.

The following information is corrected to 31 December 1954, all measurements and quantities being translated into the British equivalents:

### EXTENT OF THE SYSTEM

Route Milage Worked: 1,347 miles of metre (3 ft. 3 $\frac{3}{8}$  in.) gauge line, including 304 miles electrified on the 3,000 volts direct current, overhead wire system.

Locomotives: 266 steam, 46 electric, and 67 diesel-electric.  
Coaching Stock: 384 vehicles, including 4 electric 3-car train sets and 2 diesel 3-car train sets.  
Goods and Livestock Wagons: 8,736, including 526 service vehicles.

### TRAFFIC (YEAR ENDED 31 DECEMBER 1954)

Passengers: 16,205,000 journeys, comprising 9,714,000 suburban journeys averaging 12 miles in length, and 6,491,000 non-suburban journeys averaging 70 miles in length.

Goods and Livestock: 5,031,600 tons hauled an average distance of 219 miles, including 267,600 tons of livestock hauled an average distance of 279 miles.

### ITEMS OF INTEREST

Track Milage: At least 87 miles were double line, and total track length, including sidings, was 2,131 miles.

Weight of Rails: 101.5, 90, and 75 lb. per yard.

Maximum Axle Loading: 40,000 lb. (17.86 tons).

Maximum Authorised Speeds: 70 km./hr. (43 $\frac{1}{2}$  m.p.h.) for passenger trains.

Maximum Moving Dimensions: Height above rail level, 13 ft. 9 in.; width, 9 ft. 10 in.

Steepest Gradient: 1 in 36.7.

Sharpest Curves: 4 $\frac{1}{2}$  chains radius.

Train Control and Signalling: Electric staff generally, but manual block over 4 per cent of the route length. Both semaphore and light signals are used.

Typical Main-Line Locomotives:

35 1-Co-Co-1 type electric locomotives, 127.9 tons total weight; 116 tons adhesion weight; 6 motors; 1,910 h.p. (continuous rating); 2,195 h.p. (one-hour rating); built by General Electric, U.S.A., first introduced about 1944.

42 Co-Co type diesel-electric locomotives, 62.9 tons total weight, all adhesive; 6 motors; Cooper-Bessemer six-cylinder diesel engine with maximum output of 660 h.p. at 1,000 r.p.m.; supplied by General Electric in 1947-48.

12 4-10-2 type three-cylinder steam locomotives, 161.2 tons total weight, 111.6 tons engine weight, 83.6 tons adhesion weight; one inside cylinder 17 $\frac{1}{2}$  in. by 22 in., two outside cylinders 17 $\frac{1}{2}$  in. by 24 in.; coupled wheel diameter 4 ft.; tractive effort (at 85 per cent), 44,600 lb.; working pressure, 235 lb. per sq. in.; grate area, 65.3 sq. ft.; combined heating surface, 4,197 sq. ft.; ordered between 1935 and 1939 from the American Locomotive Company; latterly displaced by extension of electrification.

Some 2-8-4 type steam locomotives (out of a total of 66 ordered in 1949 from French locomotive works for various Brazilian metre-gauge railways); engine weight 68.9 tons, adhesion weight 35.9 tons (weight of 12-wheel tender not given); two cylinders, 17.1 in. by 22 in.; coupled wheel diameter, 4 ft. 2 in.; working pressure, 213 lb. per sq. in.; tractive effort (at 85 per cent), 27,330 lb.; designed under the direction of M. Chapelon.

In June 1954, 21 1,600 h.p. diesel-electric locomotives, 98.2 tons total weight, were ordered from the General Electric Co. ●

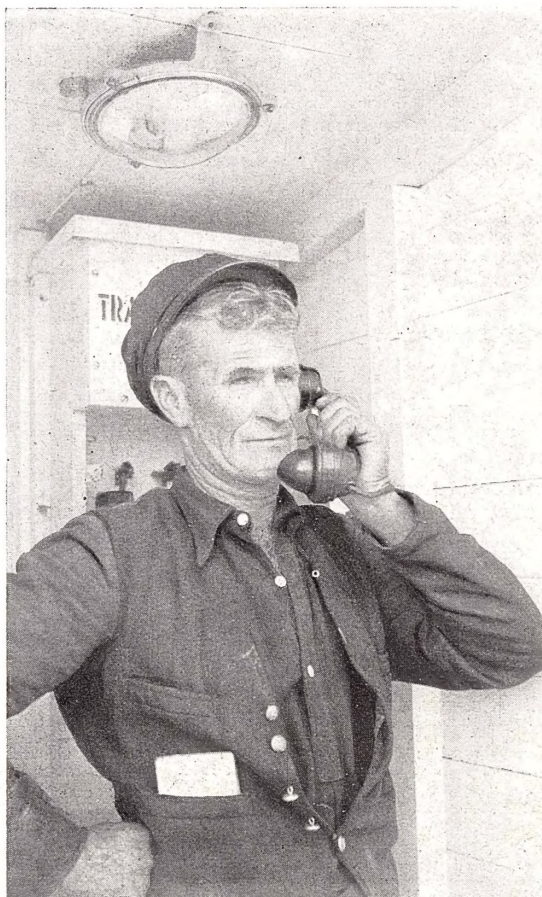
★ ★ ★

### FOR FASTER TICKET SERVICE

**A** NEW suburban booking office in the main concourse of Wellington station is equipped with the latest types of ticket-printing and issuing machines for rapid service. Brought into use on 29 March, it is conveniently located close to the Featherston Street entrance, through which most suburban passengers pass ●



## EMPLOYEE ACCIDENT PREVENTION



Vigilance is essential.  
 Enquire from Train Control.  
 Look out *all* the time.  
 Obey the rules – avoid the risks.  
 Construct trolley stands at frequent intervals.  
 Inspect your trolley regularly.  
 Pack tools safely on trolleys.  
 Exercise your judgment – play safe.  
 Drive carefully on a wet or greasy rail.  
 Enquire from Train Control.  
 Speed must be controlled – keep it down.

Ask for information correctly.  
 Never pass telephones – there may be vital information.  
 Don't propel material trolleys.

Time is important – check your watch.  
 Reduce your speed through turnouts and tunnels.  
 Over-confidence causes accidents.  
 Lift carefully to avoid strain.  
 Level crossings are dangerous – slow down.  
 Enquire from Train Control.  
 You are your best safety device.  
 Safe, intelligent operation prevents accidents.

